LAWFOYER INTERNATIONAL JOURNAL OF DOCTRINAL LEGAL RESEARCH

(ISSN: 2583-7753)

Volume 2 | Issue 1

2024

© 2024 LawFoyer International Journal of Doctrinal Legal Research

Follow this and additional research works at: www.lijdlr.com
Under the Platform of LawFoyer – www.lawfoyer.in

After careful consideration, the editorial board of LawFoyer International Journal of Doctrinal LegalResearch has decided to publish this submission as part of the publication.

In case of **any suggestions or complaints**, kindly contact info.lijdlr@gmail.com

To submit your Manuscript for Publication in the **LawFoyer International Journal of DoctrinalLegal Research,** To submit your Manuscript Click here

INTELLECTUAL PROPERTY IN THE DIGITAL AGE

Akhila Anand[1] & K Gopika[2]

I. ABSTRACT

In the digital age, the concept of Intellectual Property Rights (IPR) is undergoing a profound transformation. The surge in digital content creation and dissemination has given rise to a myriad of challenges and opportunities. This paper delves into the dynamic landscape of IPR, focusing on key issues and innovations. It explores the complexities of copyright protection in the digital realm, the intricacies of patent rights in an era of rapid technological advancements, and the emergence of novel forms of intellectual property.

As the digital age reshapes traditional notions of creativity, access, and innovation, it is imperative to strike a delicate balance between safeguarding creators' rights and fostering an environment that encourages the free flow of knowledge and ideas. This research sheds light on the evolving domain of IPR, offering fresh perspectives on how it intersects with technology and society, thereby paving the way for a sustainable future in the digital era.

II. INTRODUCTION: UNDERSTANDING THE DIGITAL AGE

Rights to intellectual property (IP) are granted to people or entities primarily in relation to creative works, such as inventions, literary and artistic works[3], names, symbols, images, and designs[4] used for commercial purposes. For a restricted time, they grant the creator the right to stop others from using their creations without permission. Intellectual property is divided into two categories: artistic and literary property (cultural creations) and industrial property (commercial innovations). The industrial revolution brought

[1] BBA LLB, 10th semester student at School of Legal Studies, CUSAT.
[2] BCOM LLB, 10th semester student at School of Legal Studies, CUSAT.
[3] Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, art. 2.
[4] Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, art. 1.

with it new laws governing commerce, business, and post-industrial society governance.[5] The revolution of global information and communication is currently undermining long-standing organizations and customs in ways that are hard to understand. Governments are being forced to pass laws pertaining to the management of knowledge in society because of the unprecedented changes taking place in the systems of political and socio-economic organization.[6]

Intellectual property rights have become extremely important with the extraordinary development of computers and the Internet, as well as the expanding acceptance of e-commerce. The difficulty in identifying and protecting intellectual property infringements in the virtual sphere is a drawback to this trend of increased reliance on the Internet and information and communication technologies (ICT). The question is how to safeguard one's intellectual property rights and stop unauthorized use of it online.

In the meantime, the global Information and Communications Revolution has swept across the industrialized world, upending political and economic barriers as well as long-standing laws. The majority of developing nations must make a quantum leap in their ability to enact laws in order to safeguard their own interests and prevent technology owners from abusing it—the precise boundaries of which are still unknown. The world now faces this problem as a result of the development of the Internet, the Information Highway, and cyberspace.

Furthermore, due to its many advantages and uses, electronic media is quickly becoming more and more significant. It serves as the foundation for modern business to reach new heights. It is the research location where the literary works, contents, models, and creative advertisements are developed. Since the development of information and communication technology, the Internet has gained popularity due to its superiority over all other mass communication tools that have an impact on people's lives. Because

[5]Joel Mokyr, The Industrial Revolution and the Birth of the Modern British Economy (Princeton University Press 2018)

[6] Gunmala Suri, Intellectual Property Rights Management: Emerging Cyberspace Issues in Knowledge Society: A Critical Analysis.

intellectual property is closely linked to an individual's application of their intellectual abilities, it is more applicable in the context of electronic media. The creators of the advertisements on websites and widely distributed through electronic media own the intellectual property associated with them. The advertisers' creative works, such as the photographs, font styles, punch lines, color combinations, and content, are utilized to promote their brands. Conversely, the website constitutes an intellectual property in and of itself. Intellectual property also includes the software that runs computers and other applications.[7]

III. COPYRIGHT ISSUES IN THE DIGITAL AGE

Copyright law protects the expression of ideas, not the ideas themselves.[8] A collection of exclusive rights that belong to the copyright owner is referred to as copyright.[9] Intellectual property and the Internet are closely related, both in terms of their technical both the network's infrastructure and the goods that are traded there. It is evident that intellectual property is moving online with regard to the rights of every species. In the vast field of copyright many literary, cinematic, and artistic creations—most notably computer programmes have already been migrated to the internet. A vast range of human creativity is protected by copyright and related rights. Such protection extends to a large portion of the creative content that drives e-commerce. All "literary and artistic works" are protected by copyright under the terms of the Berne Convention[10], which is the most significant international copyright convention. This term encompasses a wide range of creative endeavor's, including fictional and non-fictional writings, computer programmes, scientific and technical texts, databases that are unique in the way they are arranged or selected, audiovisual works, fine art, including paintings and drawings, and photographs. Related rights safeguard the contributions of people who enhance how

[7]. Veena, "Electronic Media and Intellectual Property Rights," The ICFAI Journal of Intellectual Property Rights 5.2 (2006).
[8] Copyright Act, 1957, s 13,
[9] Copyright Act 1957,s14,
[10] Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886.

literary and artistic works are presented to the public. These people include broadcasting companies, phonogram producers, actors, dancers, singers, and musicians, as well as performing artists.

All of these protected materials can be transferred and used digitally over interactive networks thanks to digital technology. Through the "digitization" process, these materials can be transformed into binary format that can be sent over the Internet, copied, and reused in flawless digital form. Although it is already commonplace to transmit text, music, images, and computer programmes over the Internet, this is also increasingly true for the transmission of audiovisual works like feature films, as the limitations of limited bandwidth start to vanish technically. Contents covered by related rights and copyright, including a variety of goods for amusement and information, makes up a large portion of the useful e-commerce subject matter.

The system of copyright and related rights has been greatly impacted by e-commerce, and the evolution of e-commerce is being influenced by the extent of copyright and related rights, given the capabilities and features of digital network technologies. In order to prevent digital technology from undermining the fundamental principles of copyright and related rights, it is imperative that legal regulations are established and implemented correctly. While mechanical copying by individual consumers is possible with older technologies like photocopying and taping, it is limited in quantity, takes a lot of time, and produces lower-quality copies. Furthermore, the copies and the person making them are situated in the same physical location. On the other hand, copies made over the Internet can be made virtually instantly and indefinitely without any noticeable loss in quality. Furthermore, it only takes minutes to send these copies to any location on the planet. Traditional markets for the sale of copies of programmes, artwork, books, and movies may be disrupted as a result. The widespread commercialization of CDs at the same time has made this exploitation worse. Burners and MP3 players that are portable and tailored to the most widely used file format.

© 2024. LawFoyer International Journal of Doctrinal Legal Research (ISSN: 2583-7753)

The proliferation of literary and creative works on the internet has posed significant challenges to the enforcement of copyright protections, especially when considering the principle of net neutrality. Network neutrality is the concept that internet service providers (ISPs) should treat all internet traffic equally, without favoring or discriminating against any particular website, content, or service. In the context of copyright, this means that ISPs cannot selectively block or throttle access to websites or platforms that may facilitate the sharing of copyrighted materials.

While net neutrality aims to maintain an open and free internet, it inadvertently creates a barrier for copyright holders seeking to prevent the unauthorized distribution of their works online. Without the ability to impede access to specific sites or services, it becomes more difficult to enforce copyright protections in the digital environment. This has led to debates and attempts to strike a balance between preserving network neutrality and providing adequate safeguards for intellectual property rights in the digital age.

IV. PATENT RIGHTS IN THE DIGITAL ENVIRONMENT

A patent is a government-granted monopoly on an invention that gives only the owner the authority to create, use, or market the invention in that nation. An invention is typically a tool, a product, or a process for producing a product; however, signal processing techniques may also qualify for patent protection. Many players in the dot-com industry today are investing hefty sums of money to obtain "e-commerce" patents related to electronic commerce.

The majority of these patents are probably invalid and are partially software and partially business method patents. As evidenced by reality, a large number of e-commerce patents are not objectively valid and are instead enjoying the same presumption of validity that all other patents do and they escape prosecution. Reality shows that numerous software and business method patents that have been issued are invalid.[11]

[11] "Software Patents and the Malfunction of the Patent System" (Stanford Technology Law Review, 2021) https://stanford.io/3JJYvJz

In the past, patents could only be obtained for technological innovations such as medicines, light bulbs, shavers, and the like. New methods of making money or marketing goods were frequently expressly prohibited by patent laws. This used to also apply to software, but due to the industry's rapid expansion and the growing need to safeguard innovations connected to software, most western countries started to patent software ten years ago.

A. Protection of Computer Programs

Patents have shown to be a useful instrument for setting up barriers in the digital sphere, enabling businesses to bar others from using their inventive methods of product promotion and advertising. As the ensuing examples demonstrate, a patent may be a company's most valuable asset when conducting business online. Yet there are a few hidden flaws. Once software was granted patents, the majority of these patents covered "genuine" inventions that were inadvertently partially or fully realized in software. These could include techniques for enhancing television signals prior to their presentation on a screen, achieving quicker hard drive access times, or guaranteeing the accuracy of data stored in databases.

Most of the patent office's seem to concur that inventions contained in software are patentable as long as there is a technical system or a technological advancement, despite the ongoing discussion regarding the degree of inventiveness that should be necessary for patents on such inventions.

B. Protection of Internet Business Method

The profitable field of electronic commerce on the Internet has given rise to a common term for the process of conducting business communications and transactions over computer networks: electronic commerce. Electronic commerce refers to the exchange of goods and services between parties. Due to the widespread use of e-commerce, a lot of businesses wish to safeguard their online business practices. New Internet business models have been seeing patent protection, according to internet companies. Many of

these patents have been issued following the decision in State Street Bank & Trust Co v. Signature Financial Group Inc,[12] where the United States Court of Appeals for the Federal Circuit recognized that methods of doing business are patentable subject matter, as long as they produce useful, concrete, and tangible results.

The term "Internet patent," which formerly applied to patents covering anything related to the Internet, including methods of transmitting information over it, has evolved to include data compression and encryption techniques. As a result, it is safe to say that the legal protection associated with a given issue increases with its complexity.

V. CHALLENGES OF IPR LAWS IN INDIA

In India, the governing body /organization for IPR legislation is "The Controller General of Patent, Designs, and Trademarks." As a member to the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), India is expected to align its statutes, enforcement mechanisms, and dispute resolution procedures to ensure intellectual property rights protection. To protect intellectual property rights, the government has well-established statutory, administrative, and judicial structures in place. Despite the lack of a formal law protecting trade secrets and know-how, they are protected under common law, with courts acknowledging their importance and violations of secrecy.[13]

Copyright law is currently the most effective tool for dealing with IPR issues on the Internet. The Indian Copyright Act, originally enacted in 1957[14], was widely amended in 1994[15]. The Copyright Act is now deemed a piece of legislation as a result of these revisions, and the overall outlook is that the updated Act is highly capable of enduring the copyright challenges of digital technologies, particularly those of the Internet. The Act has adapted to the digital era by deleting certain restricted provisions and phrases

[12] State Street Bank & Trust Co. v. Signature Financial Group, Inc., 149 F.3d 1368 (Fed. Cir. 1998).
[13] Philip Ashok Alex, Upcoming Challenges in IPR and Way Forward, Finology Blog, https://blog.finology.in/Legal-news/Upcoming-Challenges-in-IPR (last visited June 10, 2023).
[14]The Copyright Act, 1957, Act No. 14 of 1957, India Code.
[15] The Copyright (Amendment) Act, 1994, Act No. XX of 1994, India Code.

and broadening the definitions of works such as cinematograph films[16] (motion pictures) and sound recordings[17] (phonograms) to encompass such works in any medium within its purview. It has not, however, taken into account all of the contemporary digital challenges.

One of the primary copyright issues concerning the threats of IPR in the present scenario is establishing the periphery between private use and public use in internet. The Indian Copyright Act, like all copyright laws across the world, distinguishes between reproduction for public and private use. Reproduction for public use requires the permission of the right holder, whereas fair dealing for private use, research, criticism, or review is permitted by law.[18] With the ability of an individual to send out over the Internet any copyrightable work to myriads of users simultaneously from the privacy of his/her home, and users being able to download a perfect copy of the material transmitted, in their homes, this distinction becomes negligible. The degradation of this fine distinction that should actually separate the public and private uses is the main reason why many feel that a set of new norms is required in copyright.

The emergence of new technologies and the digital age have presented new challenges to the protection and enforcement of intellectual property rights (IPRs), particularly in areas such as 3D printing, artificial intelligence (AI), spatial computing, and so on. Technological advancements have created new challenges that necessitate regulations and appropriate safeguards. In this context, intellectual property asset preservation is critical for promoting innovation and technological advancement.

There is a persistent lack of knowledge available to policymakers and the general public about the benefits and drawbacks of IPR regimes and trade issues. This is due, in part, to the polarity of the problems and the vested interests of the many parties presenting their

[16] The Copyright Act, 1957, Act No. 14 of 1957, § 2(f), India Code.
[17] Indian Copyright Act, 1957, Act No. 14 of 1957, § 2(xx), India Code.
[18] Indian Copyright Act, 1957, Act No. 14 of 1957, § 39, India Code.

perspectives. Because there is a shortage of information in a usable format, numerous interest groups can seize the spotlight and propagate their own message, regardless of the facts. We require a balanced discussion. It is intended that the current text would aid in that dialogue and lead to the creation of some sort of consensus statement indicating areas where there is widespread agreement on a position. Current regulatory structures and national legislation are frequently incapable of dealing with the speed and nature of ongoing trade-related changes. Despite the long lead times for enacting WTO compliance legislation, many countries pass hasty legislation simply to avoid penalties for noncompliance. Global trade litigation, while necessary in the current framework, is slow and costly, favoring the large entity over the small entity. More effective dispute resolution mechanisms must be developed.

Coverage of temporary reproductions was a contentious issue at the World Intellectual Property Organization (WIPO) Diplomatic Conference in December 1996, and it remains so to this day. According to Indian law, reproduction must be in a material form, but it also includes "storing it in any medium by electronic means"[19]. Even if a user only wants to browse, temporary copying takes place on his or her computer. In attempting to analyze copyright offenses, the Indian Copyright Act assumes that the infringement or aiding and abetting of the infringement must be done "knowingly" by a person.[20] There is a good chance that an Internet service provider, who may not have been aware of the subscriber's copyright infringement, will be absolved of liability and avoid punishment under the term "knowingly."

In the seamless world of the Internet, the enforcement of national IPR laws bound by territorial jurisdictions raises difficult issues. As a result, this area urgently requires international law coordination; otherwise, the threat of liability in certain countries may make it mandatory for the Internet service provider to examine the material being

[19] The Copyright Act, 1957, Act No. 14 of 1957, § 14(a)(i), India Code.
[20] The Copyright Act, 1957, Act No. 14 of 1957, § 63, India Code.

transmitted for copyright clearance, which could lead to a delay in the entire process. The challenge is to accelerate rather than slow the flow of information. Every significant technological advancement causes a shift in its pattern, and the Internet is no exception.

VI. THE EVOLUTION OF INTELLECTUAL PROPERTY RIGHT LAWS IN INDIA: NAVIGATING THROUGH THE DIGITAL ERA

In recent years, the rapid advancement of technology has ushered in an era where the digital landscape plays a pivotal role in shaping various facets of society. Intellectual Property Rights (IPR) law, a crucial legal framework that protects creation of the mind, has had to adapt to the challenges and opportunities posed by the digital age. The digital era has transformed the way creations are generated, disseminated, and consumed. In this context, the challenges for IPR law have become increasingly complex. With the ease of digital reproduction and distribution, protecting intellectual property has become a daunting task. In India, the legal framework has had to grapple with issues such as online piracy, unauthorized use of digital content, and the blurred lines between innovation and imitation in the digital space.

Recognizing the need for a robust legal framework, India has witnessed several amendments to its IPR laws. The Copyright (Amendment) Act, 2012[21], for instance, aimed to address digital challenges by introducing provisions related to technological protection measures and rights management information. Additionally, the advent of the Digital Millennium Copyright Act (DMCA) has influenced discussions on safe harbors for online service providers, striking a delicate balance between protecting intellectual property and fostering digital innovation.

VII. PATENTS AND SOFTWARE IN THE DIGITAL AGE

The rise of software-driven innovations has posed unique challenges to the patent system. In India, the patentability of software has been a subject of debate. Striking the

[21] The Copyright (Amendment) Act, 2012, No. 27 of 2012, India Code.

right balance between incentivizing innovation and preventing the grant of overly broad patents has been a challenge for the Indian patent office. Recent judicial decisions have provided some clarity, emphasizing the need for a technical contribution and practical application for software-related inventions. The digital era has also witnessed the growth of open-source initiatives, challenging traditional notions of intellectual property. India, recognizing the collaborative nature of innovation, has seen a shift toward embracing open-source software and creative commons licenses. This shift reflects a nuanced understanding of IPR, acknowledging the importance of both protection and collaboration in the digital landscape.

VIII. CONCLUSION

As India navigates the complexities of the digital era, the evolution of IPR law remains a dynamic and ongoing process. Striking a balance between fostering innovation and protecting intellectual property is paramount. The legislative amendments and judicial decisions indicate a proactive approach, but challenges persist. Moving forward, a comprehensive strategy that combines legal measures, technological solutions, and international cooperation will be crucial to ensuring the continued relevance and effectiveness of IPR law in India's digital future. While legislative amendments are critical, effective enforcement mechanisms are equally essential. The digital era has brought forth new dimensions of enforcement challenges, such as cross-border issues and the anonymity afforded by the internet. India has taken steps to enhance enforcement capabilities, but the global nature of digital platforms necessitates international cooperation to combat piracy and infringement effectively.

In India, the internet is still in its nascent stages. Many of the inquiries raised in this paper are theoretical and have not yet manifested in real-world scenarios. Nonetheless, it is imperative to thoroughly examine these hypothetical questions to expedite the growth of the Information Superhighway while safeguarding the rights of copyright owners. Striking a balance between the broader public interest and the interests of authors and

disseminators of copyrighted works is crucial. It is essential to seek a golden mean that accommodates both.

Importantly, it is crucial to note that at the same time, adhering to the latest Intellectual Property Rights (IPR) standards should not exacerbate the divide between developed and emerging countries. It is imperative that the implementation of new IPR standards fosters inclusivity rather than contributing to a widening gap between nations with different levels of economic development. The evolution of IPR law in India is not merely a legal necessity but a testament to the nation's commitment to fostering a climate where innovation thrives, and intellectual property is both protected and harnessed for the collective progress of society. The quest for solutions must be guided by the principles of equity, ensuring that the interests of copyright owners are protected without impeding the broader societal benefits of digital access and dissemination of information. The unfolding narrative of IPR law in India in the digital era is a story that continues to be written, with each legislative amendment and judicial decision shaping the plot of a future where innovation and protection coexist seamlessly.

IX. REFERENCE

1. Ananth Padmanabhan, Intellectual Property Rights: Infringement and Remedies (LexisNexis, Nagpur, 2012).
2. Anderson, 'Rationale for Intellectual Property Rights in the Electronic Age' in New Economy Handbook (Elsevier Science 2003).
3. Cohen, J. B., Dilemma in Cyberspace, Editor & Publisher, 129(51), 20-21 (1996).
4. David Bainbridge, Intellectual Property (3rd ed. 1996) p. 19.
5. Dr. Gupta & Agarwal, *Cyber Laws* (Premier Publishing Company, Allahabad, 2010), at 324.
6. Dr. Farooq Ahmad, *Cyber Law in India* (New Era Law Publication, New Delhi, 2012), at 28.

7. Harish Chander, *Cyber Laws and IT Protection* (PHI Learning Private Ltd. Publication, New Delhi, 2012), at 14.
8. Kellam, L. (2009). *Title of the Document*. Available at https://libres.uncg.edu/ir/uncg/f/L_Kellam_Intellectual_2009_Embargoed%20until%20October%202010.pdf.
9. Maloney, M. C., Intellectual Property in Cyberspace, 53 Bus. Law. 225 (1997).
10. Malwad, N. M., & Anjanappa, M., "IPR in digital environment: issues of concern to library community," available at http://ir.inflibnet.ac.in/handle/1944/130 .
11. N.S. Gopalakrishnan, *Principles of Intellectual Property* (EBC, Lucknow, 2014).
12. Paul Torremans, *Holyoak & Torremans Intellectual Property Law* (Oxford Univ. Press, 2010).